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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/934,947	08/22/2001	Seiji Takeuchi	1232-4756	8874
27123	7590	02/15/2006	EXAMINER	
MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101			RAO, G NAGESH	
			ART UNIT	PAPER NUMBER

1722

DATE MAILED: 02/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/934,947	TAKEUCHI ET AL.	
	Examiner	Art Unit	
	G. Nagesh Rao	1722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 17,24-39,41 and 42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17,24-35 and 37-39 is/are rejected.
- 7) ☒ Claim(s) 36,41 and 42 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                                    |

### ***Claim Objections***

1) Claims 36 and 41-42 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend on one element from one dependent claim and another element from another dependent claim, as claim 36 depends on 34 for one aspect and 24 for another aspect, whereas claim 41 is dependent on claim 36 and as well arbitrarily dependent on claims 17 or 24-39 which is improper and fails to properly define its limitation and dependency. See MPEP § 608.01(n). Accordingly, the claims 36 and 41-42 have not been further treated on the merits. Examiner suggests that applicant amend claim to include the limitations of one aspect in the language and then depend on the other claim in order to avoid the improper multiple dependency. Examiner has noted the proposed change of amending claim 36 so that it is no longer objectionable due to its improper multiple dependency form, and feels the correction should be sufficient for future presentation and consideration.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1) Claims 17 and 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoffmann (PG Pub US 2003/0234981) in view of Allan (PG Pub US 2003/0067679).

Examiner is notifying applicant that although Hoffmann 981 and Allan 679 have PG Pub dates that fall after applicant's foreign priority and US filing date, both applications have earlier provisional application filing dates. The documents included in this correspondence are the documents that have provided support towards Hoffmann's 981 and Allan's 679 applications.

In a system pertaining to a projection optical system including a plurality of optical elements, Hoffman 981 teaches an optical system which includes a projection lens formed of a plurality of optical elements, two or more of which are

constructed cubic crystalline material and oriented with their specified crystalline directions pointed in a manner situated around the optical axis and with relative rotations about the optical axis to give reduced retardance for light propagating at small angles relative to the system optical axis, and one or more elements oriented with the optical axis substantially along a particular cubic crystalline lattice direction to give reduced retardance for off-axis light propagating at larger angles with respect to the system optical axis, ergo capable of being offsetted from one another at an axis perpendicular from their crystal directions for each optical element (See Abstract, P.2 Sections 0012-0020).

However Hoffman 981 although eludes to the use of the 010 or 001 directions for the crystal optical element (See P.2 Section 0013) it fails to teach optical elements comprised specifically of the 010 or 001 directions.

Allan 679 pertains to a projection optical system including an optical element composed of a calcium fluoride crystal which is understood to be a type of isometric crystal wherein the system is capable of being less than 10 degrees with respect to the axis of the isometric crystal and an optical axis of the optical system. Wherein the optical element may be comprised of a crystal with a crystal planes or crystal directions including that of 010 or 001 (See abstract, Page 1 Sections 0001-0012, Page 2, Sections 0016-0019, Page 4 Section 0032).

It would be obvious at the time of the invention to one with ordinary skill in the art to modify the teachings of Hoffman 981 with that of Allan 679, considering, Hoffman 981 eluded to crystal direction of the optical element could be comprised of a direction as claimed by applicant, but further supported by Allan 679 for aiding in desired cases when dealing with a type of wavelength laser or birefringence angle.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3) Claims 24-33, 37-39, and 42 are rejected under 35 U.S.C. 102(e) as being anticipated by Hoffman (US PG Pub 2003/0234981).

Examiner is notifying applicant that although Hoffmann 981 has a PG Pub date that falls after applicant's foreign priority and US filing date, the application has an earlier provisional application filing dates. The documents included in this

correspondence are the documents that have provided support towards Hoffmann's 981 application.

From the aforementioned Hoffman 981 pertains to a system for a projection optical system including a plurality of optical elements, Hoffman 981 teaches an optical system which includes a projection lens formed of a plurality of optical elements, two or more of which are constructed cubic crystalline material and oriented with their specified crystalline directions (110 in particular) pointed in a manner situated around the optical axis and with relative rotations about the optical axis to give reduced retardance for light propagating at small angles relative to the system optical axis, and one or more elements oriented with the optical axis substantially along a particular cubic crystalline lattice direction to give reduced retardance for off-axis light propagating at larger angles with respect to the system optical axis, ergo capable of being offset from one another at an axis perpendicular from their crystal directions for each optical element (See Abstract, P.2 Sections 0012-0020).

Furthermore Hoffman 981 teaches that crystal can be calcium fluoride, barium fluoride for the optical elements (See P. 9 Section 0115), wherein it could be capable of producing an image side in which an angle of marginal pencils of light passing through the optical element forms an angle of 24.6 degrees or greater,

which is interpreted as a recitation of intended use, not bearing weight to the structural components comprised of the system as is the case with respect to the rest of dependent claims claiming the degree of angular separation between the optical elements, for the system is capable of being orientated in such a manner those angular positions are viewed as recitations of intended use. Finally the light source of the system could be an F<sub>2</sub> excimer laser as noted in the background of the invention (See P.1 Section 0008).


Any inquiry concerning this communication or earlier communications from the examiner should be directed to G. Nagesh Rao whose telephone number is (571) 272-2946. The examiner can normally be reached on 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GNR



ROBERT DAVIS  
PRIMARY EXAMINER  
GROUP ~~1300~~ 1700

2/6/06